



























# Model Programs of Study in Architecture, Construction, and Energy

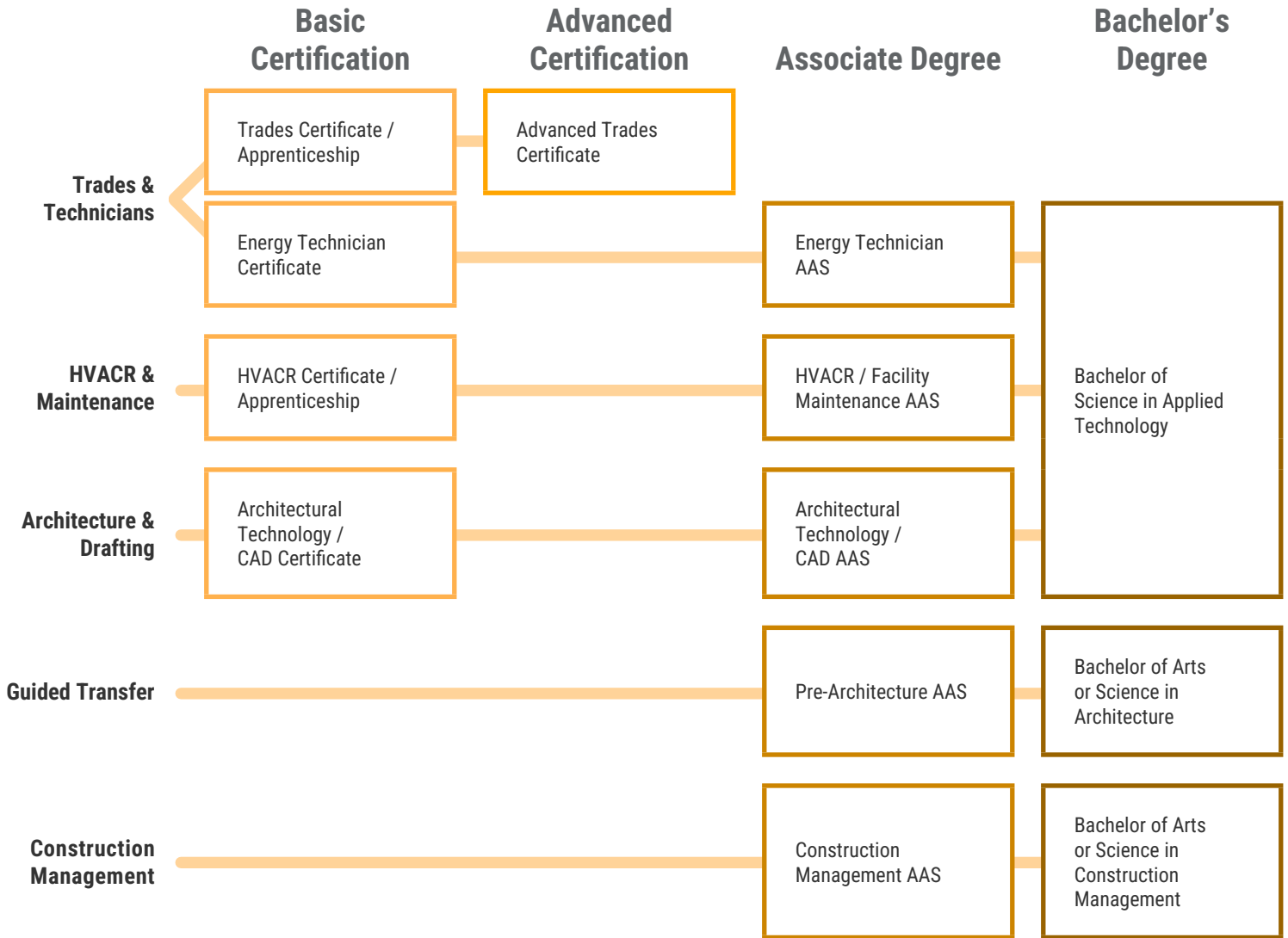
## Recommended Courses

	GRADES 9–10 Orientation	GRADES 10–12 Skill Development	GRADE 12 Capstone	 1ST YEAR* Postsecondary
<b>Trades &amp; Technicians</b>	Computer Applications for Business  Choose 1: • Intro to Technology, Trades, and Engineering • Intro to Engineering Design	Construction Trades I  Intro CAD 	Choose 1–2: • Construction Trades II  • Electrical Trades I & II 	Choose 1: • Apprenticeship Training • Certification Program
<b>HVACR &amp; Maintenance</b>			Choose 1: • HVACR I & II  • Beginning Welding 	
<b>Architecture &amp; Drafting</b>			Civil Engineering and Architecture 	Course Sequence
<b>Construction Management</b>			Intro to Business  Choose 1: • Intro to Management  • Financial Accounting 	
<b>Work-Based Learning</b>	Career Exploration (2)	Choose 1: Career Development Experience or Youth Apprenticeship		
	Team-Based Challenge (2); may be offered through <i>Career and Technical Student Organizations</i>			
<b>Math for Trades &amp; Technicians, HVACR &amp; Maintenance</b>	Choose 1: • Algebra I (or higher) • Geometry (Geometry in Construction if available)	Geometry (Geometry in Construction if available) Algebra II (or higher)	Choose 1: • Technical Math  • Transitional Math: STEM	Choose 1: • Technical Math* • College Algebra
<b>Math for Architecture &amp; Drawing, Construction Management</b>		Algebra II (or higher) Pre-Calculus	Choose 1: • College Algebra  • Calculus  • Statistics 	Choose 1: • College Algebra* • Trigonometry • Calculus*
<b>English</b>	English sequence	English sequence	Choose 1: • Transitional English • English Composition 	Choose 1: • English Composition*  • Oral Communication 
<b>Science</b>	Science sequence	Physics  (or science sequence)	Survey of Renewable Energy  (if available, or science sequence)	Science sequence
<b>Social Science</b>	Social science sequence	Social science sequence	Social science sequence	Social science sequence

KEY:  AP or dual credit course       Dual credit course       College & Career Pathway Endorsement  
 Dual credit course with IAI       Postsecondary course with IAI

\* If credit was already earned through an early college course, take the next requirement in the sequence or, if none, additional AAS or major courses

## Postsecondary Opportunities



## Selected Occupations, Wages, and Job Growth

Program	Typical Job(s)	Living Wage Potential*	Median Hourly Wage**	IL Growth: Change over 10 years ***	IL Annual Job Openings***	Typical Educational Requirements
Trades & Technicians	<a href="#">Carpenters</a>	Medium	\$33.17	4.3%	3,091	High School Diploma
	<a href="#">Construction Laborers</a>	Medium	\$30.86	10.4%	4,444	
	<a href="#">Plumbers, Pipefitters, and Steamfitters</a>	High	\$48.86	9.6%	2,038	
	<a href="#">Electricians</a>	High	\$44.14	12.7%	3,006	High School Diploma + Some College
	<a href="#">Electrical Power-Line Installers and Repairers</a>	High	\$51.23	9.4%	432	Postsecondary Certificate + Some College
	<a href="#">Electrical and Electronics Repairers, Commercial and Industrial Equipment</a>	Medium	\$32.40	8.0%	142	
	<a href="#">Electrical and Electronics Repairers, Powerhouse, Substation, and Relay</a>	High	\$51.89	4.3%	39	
HVACR & Maintenance	<a href="#">Heating, Air Conditioning, and Refrigeration Mechanics and Installers</a>	Medium	\$28.93	9.5%	967	Postsecondary Certificate + Some College
	<a href="#">First-Line Supervisors of Mechanics, Installers, and Repairers</a>	Medium	\$37.67	9.6%	1,434	High School Diploma + Some College
Architecture & Drafting	<a href="#">Architects</a>	High	\$40.72	5.4%	524	Bachelor's Degree
	<a href="#">Architectural &amp; Civil Drafters</a>	Medium	\$29.90	0.1%	287	
Construction Management	<a href="#">Construction Managers</a>	High	\$50.91	13.5%	1,471	Bachelor's Degree
	<a href="#">Cost Estimators</a>	Medium	\$38.99	4.2%	481	
	<a href="#">First-Line Supervisors of Construction Trades and Extraction Workers</a>	High	\$46.38	9.5%	1,326	High School Diploma

\* Living wage potential is based on MIT's Living Calculator ([livingwage.mit.edu](https://livingwage.mit.edu)) for Illinois in 2024. Occupations with median salaries higher than the living wage for 1 adult + 1 child (\$39.63/hour) are considered as having a "high" living wage potential. Occupations with median salaries only higher than the living wage of 1 adult, no children (\$22.86/hour) are considered as having a "medium" living wage potential, and occupations with median salaries below the living wage of 1 adult, no children (less than \$22.86/hour) are considered as having a "low" living wage potential.

\*\* Illinois Department of Employment Security (2022). Wage Information: Occupational Employment and Wage Statistics (Statewide). Retrieved April 2, 2024, from [ides.illinois.gov/resources/labor-market-information/oews.html](https://ides.illinois.gov/resources/labor-market-information/oews.html)

\*\*\* Illinois Department of Employment Security. Employment Projections (Long-Term Occupational Projections 2020-2030). Retrieved April 2, 2024, from [ides.illinois.gov/resources/labor-market-information/employment-projections.html](https://ides.illinois.gov/resources/labor-market-information/employment-projections.html)